The Suppression of Facial Hair Growth in Transsexuals Using Cyproterone Acetate

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THE persistence of beard growth is often a major problem for male transsexual patients. This makes it more difficult to live, work and mix socially in the female role. Cyproterone acetate is an anti-androgen which has been used in the treatment of male hypersexuality for more than ten years [1, 2, 3]. Hoffet [4] reported loss of body hair as a side effect in some of these patients. Hammerstein and Cupceancu [5], Barnes *et al* [6] and Dewhurst *et al* [7] showed that the drug was successful in reducing facial and body hair in a proportion of hirsute female patients, consequently we have undertaken this trial to assess the therapeutic effect of the drug on beard growth in male transsexual patients.

Patients, Treatment and Results

Seven male transsexual patients were selected by psychiatric screening. All were living as women and it was thought they might benefit from treatment. Their informed consent to treatment was obtained. One patient defaulted after one month of treatment and one after three months treatment. The remaining five patients are the subjects of this study and were all treated for at least a year. Their clinical and endocrinological features, treatment regimes and results of treatment are shown in Table 1.

The treatment regime planned was to give 100 mg cyproterone acetate daily for twelve months followed by three months without treatment. The drug was restarted at fifteen months if necessary and during the second course of treatment the effect of a dosage reduction to 50 mg daily was determined. This treatment regime had to be modified in some patients either because of side effects, (see Table 1), or because of missed appointments. All the patients were already taking various oestrogens except case 4 who restarted them one month after starting anti-androgen therapy and then continued to take these oestrogens while on cyproterone acetate. The patients were instructed to stop all hormone preparations at least a month before any planned surgery.

The results of treatment were monitored by subjective response, by noting the frequency of facial shaving, by measuring the hair score using the system of Ferriman and Galwey [8] and also measurement of the plasma androgens, testosterone, androstenedione and 5α-dihydrotestosterone. Liver function tests were obtained before and after every six months of treatment. Thyroid function tests were also obtained after six months of treatment.

After three months treatment four patients were improved and one was not. The improvement noted was that facial and body hair was finer and paler and grew more slowly and that shaving could be reduced. Temporal baldness improved in two patients. In the two patients who were working as men these improvements permitted them to obtain work as women. After six months treatment four patients were improved. The fifth patient had stopped treatment after four months due to tiredness.

After one year of treatment all patients had improved subjectively and also all showed a reduction in their hair scores. One patient had stopped shaving and the rest shaved less. Four patients became worse again within three months of stopping treatment. The fifth patient was not seen at follow up.

A second course of treatment was requested by four patients, and they all improved again on treatment, but this improvement was only partly maintained in two of them when the dosage of cyproterone acetate was reduced to 50 mg daily. Improved confidence in the female role was reported by all the patients while on treatment.

Biochemically, the plasma testosterone fell in all the patients, the plasma androstenedione fell in one patient, and the plasma 5α-dihydrotestosterone fell in two patients. (See Table 1).

Side effects were common and are shown in Table 1. Galactorrhoea occurred in four patients, but only in one of them did it antedate anti-androgen treatment. All these patients had raised prolactin levels, but normal pituitary fossa X-rays. The galactorrhoea resolved and the plasma prolactin fell after stopping treatment. Severe tiredness occurred in one patient who had to interrupt treatment intermittently for this. Mild tiredness occurred in two other patients at the onset of treatment. Although thyroid function tests were normal in all patients after six months treatment, one patient lost 4 kg in weight six months after stopping treatment and thyroid function tests then suggested mild T3 thyrotoxicosis. These tests subsequently returned to normal without any anti-thyroid treatment. Weight gain of from one to six kg occurred in three patients, and regrowth of head hair occurred in two patients.

Discussion

Cyproterone acetate decreased beard growth in all of this small group of patients. This improvement was variable, only one patient who was also having electrolysis was able to stop shaving altogether but in the others the anti-androgen made removal and camouflage of facial hair more effective. Body hair was also reduced. These effects are dose dependent and the dosage required produced side effects in all but one patient. These side effects were sufficiently severe to interrupt treatment in one patient. Stopping treatment led to a return of beard growth within two to three months. Improvement on treatment was associated with the patients increased confidence in their female role.

Table I. Clinical and endocrine details of patients, treatment regimes and results of treatment.

Case No	Age and marital state	Dosage of CTA: Time in months from start of treatment / Daily dosage of CTA	Oestrogen Treatment: Month of CTA treatment / Concurrent oestrogens and daily dose	Local Treatment: Month of CTA treatment / Frequency of shaving / Electrolysis treatment	Clinical response: Month of CTA treatment / Hair score / Subjective improvement I = improved. NI = not improved. W = worse.	Biochemical response: Month of CTA treatment / Plasma testosterone (ng/dl) / Plasma androstenedione (ng/dl) / Plasma 5 dihydrotestosterone (ng/dl) / Plasma Prolactin (ng/dl)	Side effects
1	35 div	0 100mg* 6 100mg* 12 Nil 15 100mg 18 50mg 19 50mg 22 50mg alternate days	0 Premarin 2.5mg 6 Premarin 5mg	0 daily Yes 6 ,, 12 ,, 15 ,, 18 ,, 22 ,,	0 19 6 18 NI 12 13 I 15 16 W 18 22 18	0 455 695 82 6 55 85 30 12 12 50 140 12 37 15 74 168 6 18 55 85 30 12	Tiredness severe enough to interrupt treatment and required dosage reduction. Galactorrhoea at 10 months which resolved by 13 months
2	23 s	0 100mg 6 100mg 12 Nil 15 Nil 18 Nil 21 Nil	0 Premarin 10mg	0 daily Yes 6 alt. days 12 none 15 alt. days 18 none 21 none	0 14 6 7 I 12 5 I 15 8 W 18 7 ISQ	0 125 105 12 6 25 125 31 52 12 55 70 19 15 59 177 3 7 18 21 53 199 9	Slight tiredness at onset of treatment. Galactorrhoea at 3 months which resolved by 18 months Mild T3 thyrotoxicosis 6 months after stopping treatment which resolved without treatment. Weight loss 4kg
3	29 s	0 100mg 6 100mg 12 Nil 15 50mg 18 50mg 21 50mg 24 100mg 30 50mg	0 Stilboestrol 20mg 15 Premarin 7.5mg	0 daily No 6 36 hourly 12 alt. days 15 ,, ,, 18 ,, ,, 24 daily 30 alt. days	0 12 6 7 I 12 ?† I 15 ?† W 18 ?† W 24 ?† W 30 ?† I	0 155 210 12 6 100 370 22 100 12 80 210 38 15 142 131 16 21 54 151 12 40	Regrowth of head hair (Galactorrhoea preceeded treatment with CTA and resolved at 15 months when stilboestrol changed to Premarin). Weight gain 8kg.
4	40 div	0 100mg 6 100mg 12 Nil 15 100mg 18 50mg 21 Nil 24 Nil 27 100mg	0 Nil 3 Ethinyl Oestradiol 0.02mg 24 Premarin 10mg	0 twice daily No 6 daily 12 daily 18 less than daily 27 daily	0 21 6 12 I 12 13 I 15 16 W 18 14 I	0 730 210 74 6 70 100 48 12 45 185 14 60 15 85 204 7 21 52 277 7 58	Regrowth of head hair. Mild tiredness at onset of treatment. Galactorrhoea at 11 months which resolved when treatment with CTA stopped and recurred when back on treatment. Weight gain 1kg.
5	28 div	0 100mg 6 100mg 12 Nil	0 Stilboestrol 20mg	0 twice daily No 6 daily 12 daily	0 14 6 9 I 12 4 I	0 100 225 22 6 12 55 105 12	Weight gain 4kg.

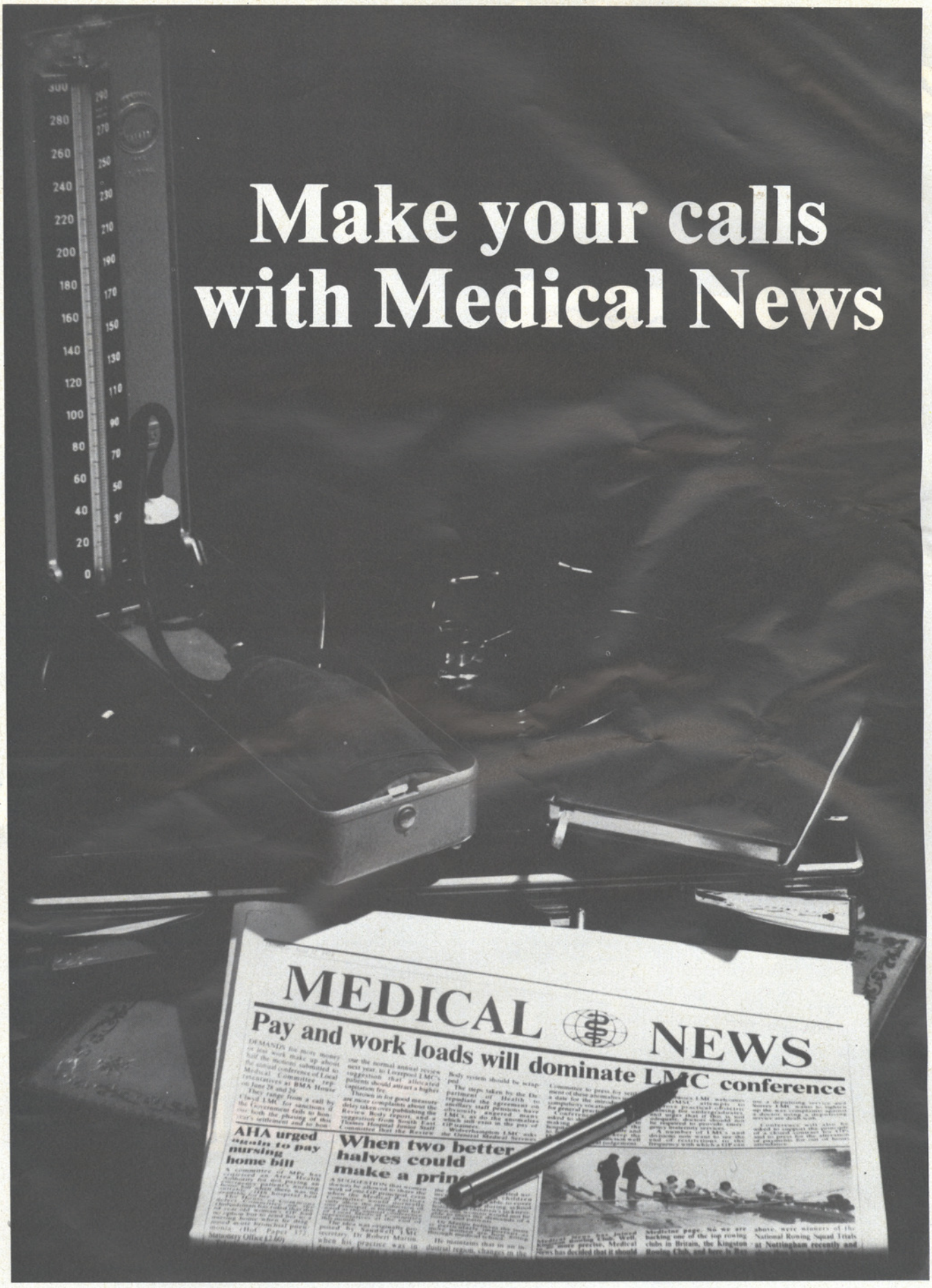
CTA = Cyproterone acetate

*Treatment omitted 5th, 6th and 10th months due to side effects (tiredness)

?† Unable to score due to recent shaving

The major effect of the drug on hair growth is thought to be due to competition with androgens at the receptors of the hair follicle [9] but there was also a significant reduction in plasma testosterone in all the patients and in addition a reduction in plasma androstenedione in one and 5α-dihydrotestosterone in two of them.

The most frequent side effect was galactorrhoea which occurred in four patients, but in one of them it antedated anti-androgen therapy. Gynaecomastia or galactorrhoea has previously been reported in 20 per cent of male patients on cyproterone acetate [10] but in our series all the patients were also taking various oestrogens and the combination may have increased the incidence of this side effect. The symptom of galactorrhoea was only elicited by direct questioning and careful examination of the breasts and it seems likely that this symptom is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commoner than previously reported.

Abnormal thyroid function tests, suggestive of T3 thyrotoxicosis occurred in one patient after stopping treatment. We found a similar condition in one of our female patients who was taking anti-androgens [7]. It would seem prudent to screen for this condition in patients on this treatment.

Cyproterone acetate has also been shown to suppress A.C.T.H. and cortisol in children [11, 12] although no overt signs of adrenal insufficiency have been reported [9].

In view of the many side effects of cyproterone acetate, the social benefits of this treatment in male transsexual patients must be carefully weighed up against the risks of treatment.

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Handicappism and the non-YAVIS

David Shore

PROFESSIONAL recognition of the sexual concerns and problems of the "handicapped" has been generated by the knowledge that up to 10 per cent of the adult population today has a physical handicap which *may* in some way pose a substantial limitation to normal activities.[1] A significant portion of the literature raises two critical issues: (1) the general approach is to deny the existence of the handicapped (2) handicapped people are considered non-sexual people. An overwhelming emphasis has been placed on the visibly handicapped who have always been treated differently. Geiger and Knight point out that "societies have traditionally classified disabled people as either totally asexual or dangerously hypersexual."[2] Visibly handicapped individuals are therefore rarely considered as . . . *individuals*, with a wide range of feelings, desires and needs, be they sexual or otherwise. One may extend this to make a functional definition that any "condition" perceived as interfering with meeting one's expectations is indeed a handicap. In cases such as the visibly disabled, however, prejudice and discrimination is so pervasive that it takes the form of a "protective concern" for people seen as less fortunate than others.[3] One must fully appreciate the fact that oppression does not necessarily require a self-awareness of such oppression.

A significant step was taken when Gagnon pointed out that any list of sexual minorities is arbitrary. There can be no final or ultimate list and any subset of activities or beliefs or preferences can become the basis for the claim for minority status. Gagnon states, "all of these minorities raise serious moral and psychological questions about the limits of the 'normal' and our capacity to understand others, to move ourselves inside someone else and experience the world as that person does."[4] To deny or to ignore the oppressed status of minority group members is to ignore the reality of their external environment. When it comes to issues of human sexuality, the larger society has for too long defined "healthy" sexuality. This situation is changing as professionals become more sensitive to the need to develop strategies that can help oppressed minority groups in their struggle with personal and social problems,[5] agreeing with Masters and Johnson that sexuality should be considered a part of the whole person.[6] Unfortunately for too long, "the whole person" in the area of human sexuality has almost exclusively meant a YAVIS (young, attractive, verbal, intelligent, successful) person[7]. More recently the United Nations World Health Organization stated that "Every person has the right to receive sexual information and to consider accepting sexuality for pleasure as well as for procreation."[8]

The concept of 'sexual handicappism' is proposed as one way of expanding these parameters, especially the sexual needs and concerns of non-YAVIS populations. Thomas Szasz (1961), Erving Goffman (1963), Thomas Scheff (1966), Robert Scott (1969), and Dorothea and Benjamin Braginsky (1971)[9] have taught us to understand "handicap" categories as well as the term "handicap" as societally created metaphors rather than as natural or objective conditions. These same authors pointed to the importance of the quality and nature of interaction between the labellers and the labelled as a pre-requisite for understanding handicap.[10]

Frieda Fromm-Reichmann from a somewhat different perspective advised us that the first pre-requisite for